Scrap Platform
Delaware, Lackawanna & Western Railroad
Scranton
Lackawanna County
Pennsylvania

HAER No. PA-132F

HAER
PA,
35-SCRAN,
4-F-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

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Historic American Engineering Record
National Park Service
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HAER PA. 35-SCRAN 4-F-

HISTORIC AMERICAN ENGINEERING RECORD

Delaware, Lackawanna & Western Railroad: Scranton Yards: Scrap Platform

HAER NO. PA-132F

LOCATION: 350 feet north of South Washington Avenue and River Street, Scranton, Lackawanna County, Pennsylvania

UTM: 18/44414/458371
QUAD: Scranton

DATE OF CONSTRUCTION: 1909

ENGINEER/ ARCHITECT: George J. Ray, chief engineer; Frank J. Nies, architect

CONTRACTOR: Delaware, Lackawanna & Western Railroad

PRESENT OWNER: United States Department of the Interior, National Park Service

PRESENT USE: Not in use.

SIGNIFICANCE: The D,L & W's Scranton scrap platform held metal, rubber and other scrap collected from the Scranton division and yards. Scrap was sorted at the platform,and then recycled or sold. The facilities represent the growing importance of scrap handling in 1909, and the D,L & W's interest in efficient materials handling.

HISTORIAN: Amy Slaton
Delaware, Lackawanna & Western Railroad: Scranton Yards Recording Project, 1989

INTRODUCTION

While erecting their new Scranton locomotive shops in 1909, the Delaware, Lackawanna & Western Railroad also built a concrete and brick scrap platform, adjacent to the new office and storehouse building and across Washington Avenue from the shops themselves. The platform was designed to facilitate the sorting of scrap--metal, rubber, and other non-wood materials--generated by the yards and shops, and probably by D,L & W crews along the Scranton division lines. In keeping with standard railroad practice of the day, sorted scrap might have been sent from the platform to any one of a number of destinations. Used bolts, switches, wheels, car parts and tools designated for reclamation might be sent to the yards' machine shops for repair; after 1912, the D,L & W operated a central scrap repair shop in Dover, New Jersey for such work. Machine borings or turnings could be packaged and melted down for recasting in the locomotive shop furnaces. Some kinds of scrap may have gone out unprocessed from the platform for immediate reuse; worn rails were used as concrete reinforcements in some D,L & W signal towers and bridges, for example.[1] Finally, all scrap that was not recyclable by the D,L & W was sold to scrap dealers, a business of growing complexity at the beginning of the twentieth century.[2] In 1906, the Railway Storekeepers Association issued a detailed classification list so that all kinds of railroad scrap

could be sold at set prices, and revisions and recommendations advice from the Association appeared regularly. The storekeepers of the D,L & W were members of the Association at the time the scrap platform was built, and though the exact profits realized by the road from prudent scrap handling are not known, evidence suggests that the D,L & W's concern with this economy was substantial.[3]

STRUCTURE AND LOCATION

The D,L & W's Scranton yards' scrap platform is 358 feet long and 38 feet wide, running east-west, perpendicular to Washington Avenue near the south edge of the yards. The platform was made of reinforced concrete, with vertical bin dividers capped with metal plate. In some places, metal plating covers the sides of the dividers as well. The platform was divided into about twelve large bins and twelve smaller bins. The smaller compartments, concentrated at the west end of the platform, have brick flooring and, until at least 1955, were enclosed in a wooden building.[4] According to one contemporary manual of railroad operation, covered bins were most often used for storage of machine borings and turnings and other smaller metal scrap, and for rope, sacking, hose and other materials that might deteriorate if exposed to the elements. Thus, though contemporary plans label the west end of the platform the "Boring House," it does seem likely that other

materials were kept there, especially because very valuable metals, such as brass, were generally kept under lock and key.[5]

The scrap platform has an open strip about 10 feet wide along its south rim where workers could sort materials. The platform had its own shears, hammers and pick axes so that certain kinds of scrap could be broken down according to in-house reclamation plans or the standard classification for saleable scrap.[6] It is notable that in the case of scrap for sale, the sellers of the scrap were responsible for its condition, and that the more carefully sorted, the more valuable a load of scrap. It is likely that little cutting of materials was done in the boring house because there was little space between the bins there. The small open space in the boring house was probably used for tool storage, and administrative activities, as will be discussed below.

The scrap platform was built to the height of standard freight cars, and tracks from the yards to the west ran along the north and south sides of the platform. It may have been the case that before the general Dover yards were built (from which all D,L & W scrap for sale was dispatched), the south side was used for unloading and sorting incoming scrap, while outgoing scrap, such as carloads for sale to dealers, was loaded on the north side. This arrangement would have assured that both kinds of activity could be kept up at the same time. As with all aspects of D,L & W yard operation, freight cars were to be kept out of commercial service for as short a time as possible. Further, a steady flow of scrap materials

reflected reduced handling costs. Manuals of scrap practice advised that materials should never be left sitting in place if they were ready for transfer or be moved more than necessary. Materials, for example, should never be rested on the ground if they could instead be moved directly from one receptacle to another.[7] Because it is known that the D,L & W regimented scrap collection after 1912, scheduling weekly cleanups and monthly scrap pickups from all road sites, it is probable that they pursued such efficiency a few years earlier in the design of the Scranton platform, as well.[8]

The movement of scrap was greatly speeded and cheapened by the overhead electric gantry crane installed at the time of the scrap platform's construction. The 104-foot-wide crane ran on elevated tracks that were supported by metal piers on reinforced concrete footings. The crane ran 1,180 feet, between the foundry and casting platform of the locomotive shops across Washington Avenue, and the uncovered portion of the scrap platform. It also served a loading platform along the south side of the storehouse/office building. Manufactured by the Shaw Company, the crane could carry 10 tons on either a magnet or a hook. The steep grade of Washington Avenue at this point permitted the construction of a bridge at yard level that carried four tracks. The bridge was equipped with a hatchway so that the crane could load or unload wagons on the street below. Such heavy-duty cranes were used at several locations in the locomotive yard complex and are credited with streamlining locomotive work of all kinds.[9] Evidence of the importance of the

crane in scrap handling can be seen in this 1910 comparison:

	Using Crane			Without Crane		
	Hours	Men	Cost	Hours	Men	Cost
To load 1 (30-ton) car of wrought scrap:	3/4	2	$.28	9	4	$5.22

A saving of 95 per cent is associated with this use of the overhead crane.[10]

In addition to the standard gauge tracks and overhead crane, the scrap platform was also served by a narrow (three-foot) gauge cart railway that carried hand-pushed or electric carts. This narrow track ran along the south rim of the scrap platform, and at three points, five-foot turntables, made by the Whiting Foundry Equipment Company of Chicago and probably of the ball-bearing type, allowed the carts to run crosswise over the platforms, too.[11] The cart railway ran throughout the locomotive shop complex, and was like that used by the South Altoona Foundry of the Pennsylvania Railroad.[12] The D,L & W also took advantage of the hilly Scranton site to install a subway fitted with the narrow gauge tracks. This allowed traffic between buildings and departments without disrupting public street traffic or shop floor activity. The subway was 14 feet wide and 9 feet high, and lighted with incandescent electric lamps. It carried most steam and fuel pipes around the shops, and much worker traffic; all lockers and timeclocks, for example, were placed in the subway.[13]

The east end of the scrap platform had a hydraulic elevator on which carts could travel between the subway and platform.

Photographs taken around 1912 show a wooden housing covering this elevator shaft.[14]

One department of the locomotive shops that probably had constant traffic with the scrap platform was the locomotive shop foundry. Borings and turnings produced in machining metal in the complex would have been collected, compacted and then melted down in cupolas, the furnaces used to melt ferrous scrap and cold pig iron into iron for casting. Site maps show the foundry to have had at least two cupolas, and by the first decade of the twentieth century, it was common for iron manufacturers to use 50-80 percent scrap in making cast iron. This practice reduced the cost and raised the quality of cast iron, and depended on the careful sorting of borings and turnings such as that which may have occurred in the scrap platform's boring house.[15]

MANAGEMENT

The general operation of the scrap platform was probably under the administration of the stores department, based next door in the storehouse/office building.[16] The stores department would have been familiar with the disbursement of materials and the task of crediting and debiting the many other departments of the railroad that consumed materials. Such record keeping allowed a measure of control over what materials were being consumed and by whom, and monitored the quality of materials, such as the length of service

received from tools and parts. A number of lesser administrative tasks were probably done at the scrap platform itself, as is shown in the presence of a 10-year-old desk, files and desk lamp in a 1918 inventory of D,L & W facilities, as well as a 26" x 34" scale.[17] Because the profitable handling of scrap required knowledgeable sorting, most railroad scrap departments employed a scrap foreman. In 1915, salaries for such foremen would have been about $70 to $90 a month.[18] A Railway Storehouse Association conference (the group was absorbed into the extensive American Railway Association around 1920) recommended that a railroad with even a small amount of scrap develop a trained platform staff so that highly paid shop mechanics would not have to spend their time sorting scrap on the shop floor, and so that untrained laborers would not be relied upon for this important work. The conference committee also stressed, however, that all shop and yard employees be informed of the importance of careful materials handling, even suggesting that the heads of all railroad departments serve a brief stint as supervisor on the scrap platform to see how sorting and reclamation worked.[19]

Another approach to scrap management demanded that whenever practical, no new materials be issued to workers without the return of expired materials.[20] This innovation was easily achieved out on the line, where new materials arrived in monthly shipments and returning stock cars could collect scrap. In railroad shops proper, making new materials harder to obtain might prevent

wasteful use, but it was agreed that the production of some scrap was inevitable. It is not known exactly which administrative and technical processes the D,L & W used, but they were no doubt involved in scrap management to a substantial degree. A Railway Storekeeper Association publication of 1910 announced that each pound of scrap generated represented an original investment of three to fifteen dollars, and by 1911, a ton of scrap sold to dealers could bring seven dollars; by 1914, the high per ton was $14.[21] Around this time, the Sante Fe Railroad made the impressive claim of having realized more than $1 million in one year from scrap sale and reclamation.[22] That the business of scrap was growing is further evidenced by the fact that by 1917, scrap prices were subject to federal regulation, just like pig iron and ferrous steel.

The permanent nature of the D,L & W scrap platform, and its elaborate connection to other structures in the yards, attest to the railroad's interest in this aspect of road management. Though the platform is now seriously deteriorated, its general shape is still evident, and its elevator, narrow gauge tracks and turntables largely intact. It clearly reflects the D,L & W's interest in organizing and controlling the flow of materials, within the Scranton yards themselves, and to and from the industrial materials marketplace.

NOTES

1.Delaware, Lackawanna and Western Railroad Company, "Signal Tower at Slateford, Pennsylvania," May 26, 1911, (plan), private collection of John Willever; and McClintic-Marshall Construction Company, "Erection Plan Bridge #60," July 28, 1906, (plan), owned by Delaware, Lackawanna and Western Railroad Company, Steamtown National Historic Site, Scranton, Pennsylvania.

2.For information on the handling of scrap in the first decades of this century, see: George H. Manlove, Scrap Metals (Cleveland: The Penton Publishing Company, 1925); proceedings of the annual meetings of the Railway Storekeepers Association; and Railway Shop Up-To-Date (Chicago: Crandall Publishing Company, 1907).

3.Proceedings of the Seventh Annual Meeting of Railway Storekeepers Association, 1910.

4.Delaware, Lackawanna and Western Railroad Company, Station Map: Tracks and Structures, 1955, Steamtown National Historic Site, Scranton, Pennsylvania.

5. Railway Shop Up-To-Date, 170.

6. "The New Locomotive Shops of the Lackawanna Railway at Scranton, Pennsylvania," Railway Age, (April 12, 1907), 601; Interstate Commerce Commission, "Inventory of Furniture, Tools and Miscellaneous Items," Valuation Section 21, Account No. 20, (June 30, 1918), 122.

7.Proceedings of the Twelfth Annual Meeting of the Railway Storekeepers Association, 1915, 137.

8."The Lackawanna Frog and Switch Shops," Railway Age Gazette Vol. 55, No.21 (December 21, 1913), 21.

9.Proceedings of the Seventh Annual Meeting of the Railway Storekeepers Association, 1910, 62.

10.Proceedings, 1910, 67.

11.Oskar Nagel, The Mechanical Appliances of the Chemical and Metallurgical Industries (New York: Oskar Nagel, 1908), 89.

12.Railway Shop Up-To-Date, 128, 130-131.

13."The New Locomotive Shops," 599.

14.Proceedings of the Eleventh Annual Meeting of the Railway Storekeepers Association, 1914, 186.

15.Manlove, 37.

16.Railway Shop Up-To-Date, 173.

17.I.C.C., "Inventory," 122.

18.Proceedings of the Twelfth Annual Meeting of the Railway Storekeepers Association, 105.

19.Proceedings of the Twelfth Annual Meeting of the Railway Storekeepers Association, 105.

20.Railway Shop Up-To-Date, 174; and Manlove, 43-44.

21.Proceedings of the Seventh Annual Meeting of the Railway Storekeepers Association, 62; and Manlove, 41.

22.Manlove, 41.

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